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ARBOR DAY

ITS PURPOSE AND
OBSERVANCE



ARBOR DAY has become associated all over the United States with patriotic and esthetic as well as economic ideas. It is at once a means of doing practical good to the community and an incentive to civic betterment. The planting of trees by school children is usually accompanied by ceremonies intended both to impress upon those present the beauty of trees and their effect in improving the appearance of school grounds, streets, parks, highways, etc., and to lead them to a realization of the value of community and national foresight. As a patriotic festival it partakes of the nature of Fourth of July celebrations or the observance of Washington's Birthday, and in Texas, where the season is propitious, it is observed on February 22. It is appropriate that it should be so, for an abundant supply of timber has always had a basic influence on the development of the American Nation, on social as well as economic conditions, on the high standards of living characteristic of this country. Even more beautiful and more important to the national well-being than the trees of street and park are the great forests of pine and fir and hardwoods that clothe the mountain sides and the sandy plains and that should be a never-failing source of wood, water, and other necessities of life and civilization. The Arbor Day tree is not only a thing of beauty and utility in itself; it is also a symbol, standing for the recognition of the importance of the forest in the life of the Nation.

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ARBOR DAY

ITS PURPOSE AND OBSERVANCE

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ORIGIN OF ARBOR DAY

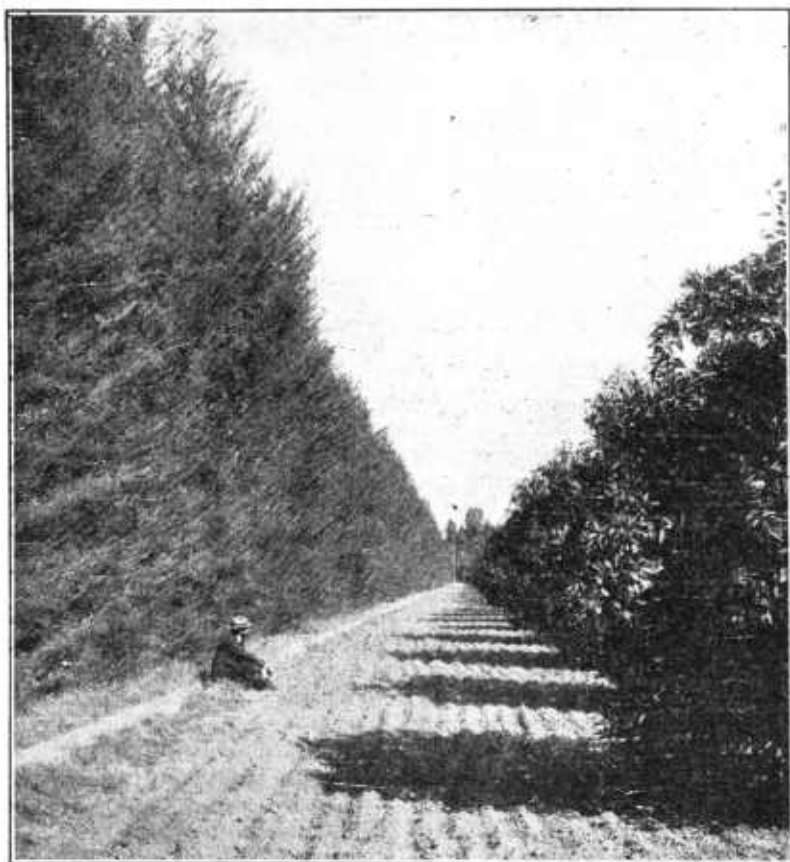
TREE PLANTING FESTIVALS are probably as old as civilization. Sacred trees and groves, planted avenues and roadsides, shaded academic walks, and memorial trees were common long before America was discovered. Arbor Day, as such, however, is purely American in origin and grew out of conditions peculiar to the Great Plains of the West, a country practically treeless over much of its area but supporting a flourishing agriculture and with a soil and climate well able to nourish tree growth.

Arbor Day originated and was first observed in Nebraska in 1872. The plan was conceived and the name "Arbor Day" proposed by J. Sterling Morton, then a member of the State Board of Agriculture, and later United States Secretary of Agriculture. At a meeting of the State Board of Agriculture of Nebraska, held at Lincoln, January 4, 1872, he introduced a resolution "that Wednesday, the tenth day of April, 1872, be * * * especially set apart and consecrated to tree planting in the State of Nebraska and the State board of agriculture hereby name it Arbor Day." The resolution was adopted, and prizes were offered to the county agricultural society and to the individual who should plant the greatest number of trees. Wide publicity was given to the plan, and over a million trees were planted in Nebraska on that first Arbor Day.

SPREAD OF THE OBSERVANCE OF ARBOR DAY

Arbor Day has been celebrated in Nebraska with enthusiasm from its very beginning to the present day. Tree planting was no new thing there when the Arbor Day plan was originated by Mr. Morton, for the first settlers found that the lack of trees was a serious drawback, and some attempt was soon made to supply the deficiency. Every farmer needs wood for fuel and fence posts. Just

as imperative is the need of protection for orchards (fig. 1), field crops, and buildings from the winds that sweep unhindered over that vast plains region. Before 1872, however, tree planting had been haphazard. The adoption of the Arbor Day plan meant the organization of the work. Thereafter the people of Nebraska were being continually reminded of the desirability of planting trees and at the same time were furnished with instructions regarding the choice of species and how to plant and care for them. Planting



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FIG. 1.—Monterey cypress windbreak sheltering an orange grove—California

was given an added impetus when the Halsey nursery, operated by the Federal Forest Service, was established in 1902. In addition to planting on Government land this nursery has distributed 2,000,000 young trees to about 10,000 residents of the State. It is estimated that more than 300,000 acres have been planted in Nebraska, so that from being practically a treeless State, only about 3 per cent of the total area having originally been covered with natural timber, Nebraska has become one of the leaders in practical forestry and is so much identified with tree raising that on April 4, 1895, the legislature passed a resolution that the State be popularly known as "The Tree Planter's State."

Kansas and Tennessee followed the lead of Nebraska in 1875, and the next year Minnesota fell into line. In Kansas the same comparatively treeless conditions as in Nebraska made the plan of immediate economic importance. In Minnesota the white pine forests were being destroyed with alarming rapidity, and no provision was being made for replacing them.

After 1876 there was for some years a check in the spread of the Arbor Day idea, and it was not until 1882 that two more States began to celebrate the day—North Dakota and Ohio.

Before 1882 the efforts to extend the celebration of Arbor Day had been made through agricultural associations and town authorities. The first celebration of the day in Ohio, which was held during the sessions of a national forestry convention at Cincinnati, took an entirely new form at the suggestion of Warren Higley, president of the Ohio Forestry Commission. Under the direction of Superintendent of Schools John B. Peaslee, the school children of the city had a prominent part in the celebration, which included a parade through the streets to Eden Park, where trees were planted in memory of distinguished men. About 20,000 children participated in the singing and reciting and in putting the soil about the trees, which had already been set in place. Two new elements were introduced into the Arbor Day plan on this occasion—the day was made a school festival and the practice of planting memorial trees and groves was inaugurated. These new developments were largely responsible for the extension of Arbor Day over the rest of the United States and beyond. Tree planting by school children became a festival combining pleasure, utility, and instruction; and one of the greatest benefits of the observance of Arbor Day has been its effects in impressing upon the minds of the young people the value of trees and the necessity of conserving all the natural resources of the country. (Fig. 2.)

The American Forestry Congress in 1883, at St. Paul, Minn., passed a resolution recommending the observance of Arbor Day in the schools of every State, and a committee was appointed to demonstrate to school authorities the value of Arbor Day celebrations. B. G. Northrop, of Connecticut, author of the resolution, was made chairman of this committee. At the annual meeting of the National Educational Association in 1884 he offered a resolution similar to that adopted at St. Paul, and although no action was taken then the next year the association adopted the following:

Resolved, That in view of the valuable results of Arbor Day work in the six States where such a day has been observed, alike upon the school and the home, this association recommends the general observance of Arbor Day for schools in all our States.

As a school festival the observance of Arbor Day has spread not only throughout the whole United States but far beyond its borders. In 1887 the educational department of Ontario set aside the first Friday in May as a tree and flower planting day. In 1895 the plan was adopted officially in Spain. It reached Hawaii in 1905, and is now in vogue in all the dependencies of the United States and in Great Britain, Canada, Australia, the English West Indies, South Africa, New Zealand, France, Norway, Russia, Japan, and China.

To commemorate the golden anniversary of Arbor Day, April 22, 1922, President Harding issued a proclamation on March 31 of that year urging the governors of the various States "to designate and set apart the week of April 16-22, 1922, as forest-protection week, and the last day of that week, April 22, as the golden anniversary of Arbor Day, and to request officers of public instruction, or counties, cities, and towns, and of civic and commercial organizations to unite in thought and action for the preservation of our

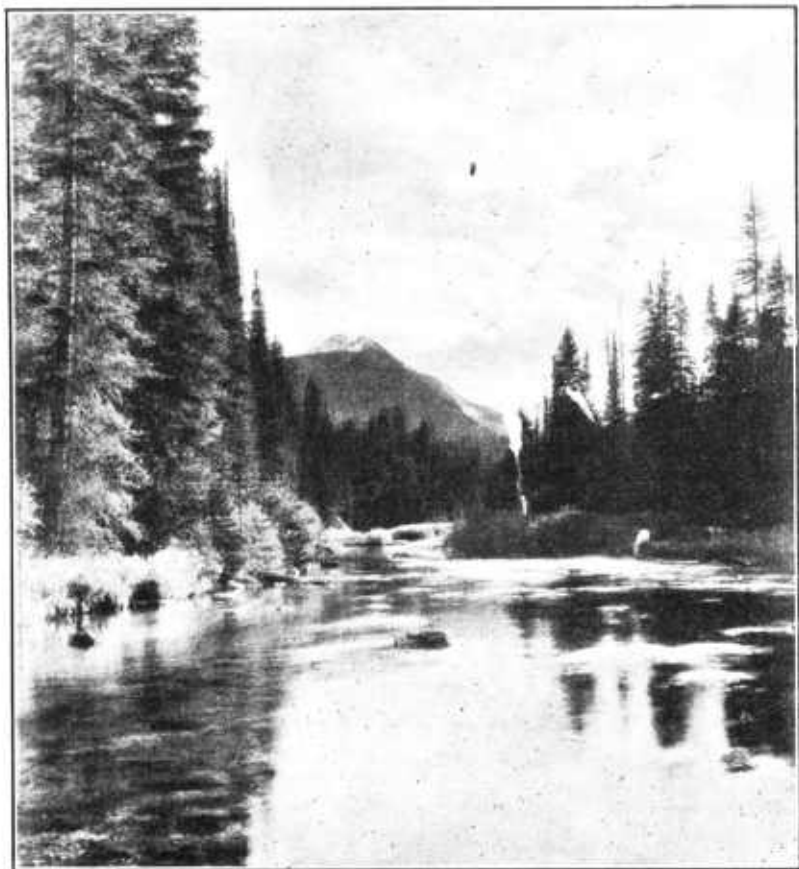


FIG. 2.—Wood and water and other necessities of life and of civilization have their source in the forest

common heritage by planning such educational and instructive exercises as shall bring before the people the disastrous effects of the present waste by forest fires and the need of individual and collective effort to conserve the forests and increase our tree growth for ornament and use."

TIME OF ARBOR DAY

The time of the observance of Arbor Day varies greatly in different States and countries, being determined somewhat by climatic conditions. In many States it is combined with Bird Day. In

general the date is early in the year in the South and is set further along toward summer in the more northern States. In some States it is in the fall and in others two dates are set, one in the spring and the other in the fall.

Dates on which Arbor Day is observed

State and Territory	First observed	Law enacted	Time of observance
Alabama.....	1887	-----	In the spring.
Arizona.....	1890	-----	In five northern counties, Friday following first day of April; elsewhere, Friday following first day of February.
Arkansas.....	1906	1905	First Saturday in March.
California.....	1886	1909	Mar. 7, birthday of Luther Burbank.
Colorado.....	1885	1889	Third Friday in April. The governor issues a proclamation each year.
Connecticut.....	1886	1886	In the spring, by proclamation of the governor.
Delaware.....	1901 (?)	-----	In April, by proclamation of the governor.
District of Columbia.....	1920	-----	Third Friday in April, by proclamation of the commissioners.
Florida.....	1886	-----	First Friday in February.
Georgia.....	1887	1890	First Friday in December.
Hawaii.....	1905	-----	In November, before the winter rains; by proclamation of the governor.
Idaho.....	1886	1903	Various dates in April, selected by county superintendents.
Illinois.....	1887	1887	In April and October, by proclamation of the governor.
Indiana.....	1884	1913	Third Friday in April.
Iowa.....	1887	-----	Proclamation of the governor.
Kansas.....	1875	-----	Option of the governor.
Kentucky.....	1886	-----	In the fall, by proclamation of the governor.
Louisiana.....	1888	-----	Second Friday in January, by resolution of State board of education.
Maine.....	1887	-----	In the spring by proclamation of the governor, usually about the middle of May.
Maryland.....	1884	1884	First or second Friday in April, by proclamation of the governor.
Massachusetts.....	1886	-----	Last Saturday in April, by proclamation of the governor.
Michigan.....	1885	-----	In April or May, by proclamation of the governor.
Minnesota.....	1876	-----	Latter part of April, by proclamation of the governor, usually upon the suggestion and recommendation of the State forest service.
Mississippi.....	1890	-----	December or February; law authorizes State board of education to fix date.
Missouri.....	1886	1889	Friday after first Thursday in April.
Montana.....	1888	1887	Second Tuesday in May.
Nebraska.....	1872	1885	April 22, birthday of J. Sterling Morton—legal holiday.
Nevada.....	1887	-----	By proclamation of governor.
New Hampshire.....	1886	-----	Early in May, by proclamation of governor.
New Jersey.....	1884	1908	Second Friday in April.
New Mexico.....	1890	-----	Second Friday in March, by proclamation of the governor.
New York.....	1889	1889	Friday following the first of May.
North Carolina.....	1893	1915	Friday after the first Monday in November, by proclamation of the governor.
North Dakota.....	1882	-----	Option of the governor.
Ohio.....	1882	1902	About the middle of April, by proclamation of the governor.
Oklahoma.....	1898	1901	Friday following the second Monday in March.
Oregon.....	1889	-----	Second Friday in February in western Oregon; second Friday in April in eastern Oregon.
Pennsylvania.....	1887	1887	In the spring, by proclamation of the governor, and in the fall by authorization of superintendent of public instruction.
Philippine Islands.....	1906	-----	Usually late in September or early in October, by proclamation of the governor.
Porto Rico.....	-----	-----	Last Friday in November.
Rhode Island.....	1887	1887	Second Friday in May—public holiday.
South Carolina.....	1898	1898	Third Friday in November.
South Dakota.....	1884	-----	No law, but generally observed in April throughout the State.
Tennessee.....	1875	1887	First Friday in April, by proclamation of the governor.
Texas.....	1890	1889	Feb. 22—Washington's Birthday.
Utah.....	-----	-----	Apr. 15.
Vermont.....	1885	-----	Usually first Friday in May; option of the governor.
Virginia.....	1892	1902	In the spring, by proclamation of the governor.
Washington.....	1894	-----	Usually the first Friday in May, by proclamation of the governor.
West Virginia.....	1883	-----	Usually observed on the second Friday in April.
Wisconsin.....	1892 ¹	1889	Usually observed on the first Friday in May.
Wyoming.....	-----	1888	Usually observed on the first Friday in May, by proclamation of the governor.

¹First general observance in the State.

More than half of the States have enacted a law for the observance of Arbor Day. In the others and in several of the Territories the day is observed by proclamation of the governor, authorization of the superintendent of education, or by other action. In at least two of the States—Nebraska and Rhode Island—the day has been made a public holiday.

ARBOR DAY AND THE SPIRIT OF CIVIC BETTERMENT

Yearly tree plantings have such a far-reaching effect on the community spirit, and through that on civic and social betterment, that no community can afford to neglect them. A clean and beautiful town is a source of pride to its citizens and a constant incentive to them to go on and do better. A slovenly town is apt to mean slovenly inhabitants. The celebration of Arbor Day may very well be the turning point in the attitude of the community toward its civic duties and by consequence toward its social life and its manner of conducting business. Nothing so helps to beautify a city or town as trees, and few things so educate the people in public spirit and foresight as the care of trees.

The celebration of Arbor Day by the planting of trees is the assumption of an all-the-year-around responsibility. Care of the trees is as important as actual planting. An essential part of the Arbor Day program is the assignment of subsequent care of the trees to individuals or organizations, such as Boy or Girl Scouts, particular classes in a school, civic associations, or other such bodies. The assignment should be definite and the responsibility clearly defined. Only in this way will the purpose of the planting be achieved. It is not enough to put a tree in the ground and sing a song over it. Some one must see that it has the water, light, and soil fertility necessary to enable it to grow, and that it is properly equipped with guard and stake where there is danger of its being injured. If this is neglected, the fruits of the planting may be thrown away; if it is properly attended to, the result will be a source of pride and inspiration to the whole community.

Arbor Day plantings also lead to greater appreciation of the beauty and civic value of trees, shrubs, and vines in parks and woodlands. No one who has come to a full realization of this beauty and value will strip dogwood, laurel, or other flowering shrubs and trees, or ruin them permanently for the sake of temporary personal gratification. The spirit of Arbor Day rules out the thoughtless, unsportsmanlike habit of "helping yourself regardless" and substitutes the principle of helping your community, your State, and your country. Arbor Day teaches not only that such a principle is generous and public spirited but that it pays in the long run.

In this connection many people are troubled about the question of cutting evergreens for Christmas trees, which have become inseparable from the full celebration of Christmas, especially where there are children. A more intimate knowledge of the principles of forestry will make the answer plain. Forestry looks not only to the perpetuation but also to the wise and proper use of forests and woodlands. It is possibly by careful selection of trees to be cut to obtain evergreen trees for Christmas not only without injury but often with positive benefit to the forest, just as it is possible to thin out stands

of young trees for fuel and obtain faster growth and greater returns in saw timber from the remaining trees. In other words, Christmas trees, like other trees, should be cut in accordance with the principles of forestry. In some places Christmas-tree plantations are managed to supply the demand, especially near large consuming centers or where suitable evergreens do not grow naturally in abundance. Emphasis needs to be put on proper care in selecting the trees to be cut rather than on restriction of the use of Christmas trees. Indeed, if properly directed, there is no reason why the joy associated with the Christmas evergreen may not be a means of arousing in the minds of young children an appreciation of the beauty and usefulness of trees; and keen appreciation of the beauty and usefulness of trees is a long step toward the will to plant and care for them, to use them wisely, to provide for their perpetuation, and in every way to respond to the inspiration of the spirit of Arbor Day.

In the half century since its first celebration Arbor Day has become firmly entrenched in the traditions of our country. It already has its place in our history. But the spirit of the day is unique in that it looks not backward but always forward. It directs the eyes of all not toward some achievement of the past but to a goal to be reached in the future. It celebrates not what we have done but what we hope and determine to do now and in the days to come. It appeals to the spirit of youth and to all that is generous and forward looking in men of every age. It carries with it the inspiration to work toward the betterment of the community, the State, and the Nation.

PLANTING OF TREES ALONG THE STREETS AND HIGHWAYS

The attractiveness of many of our cities is due in large measure to the trees planted along their streets. The esthetic advantages of roadside trees are obvious; a barren highway in the country is unattractive and uncomfortable, one planted to trees has the double attractiveness of beauty and shade.

Although Arbor Day has often been the inspiration that led to the adoption of a plan of street or road planting, the best results from such a plan are obtained when it is carried out by some stable organization. This insures not only proper care, but better coordination of effort and especially steady progress from year to year. For city streets the actual planting is now usually in charge of a shade tree commission, park board, or other officials, who see that trees suitable to the width and other characteristics of the particular street are planted and that the planting is uniform as regards species and the arrangement of the trees. On the highway, as in the city streets, planting plans must be in harmony with laws, regulations, and construction plans for the roadway, and the authorities in charge of these matters must be consulted before deciding on what stretches of roadway to plant, species to plant, spacing, and other particulars.¹

Several of the States have enacted legislation authorizing roadside planting by State agencies.² Motor associations and others have encouraged the planting of roadside trees. The American Federa-

¹ Arbor Day Handbook for New Jersey, 1924.

² See Farmers' Bulletin 1481, Planting the Roadside, for a fuller discussion.

tion of Women's Clubs has advocated a comprehensive plan for planting along the Lincoln Highway. Interest in street and highway planting continues to increase, along with interest in forestry and the conservation of our timber supplies. Roadside tree planting has been made the subject of two publications recently issued by the Department of Agriculture—Farmers' Bulletin 1481, *Planting the Roadside*, and Farmers' Bulletin 1482, *Trees for Roadside Planting*. These bulletins deal at length with both the general principles and many of the details of roadside planting plans, selection of species, and planting and care of trees.

MEMORIAL TREES

When the World War came to an end in November, 1918, the thoughts of the Nation turned at once to finding appropriate memorials for those who had fallen for the cause of world freedom. For this purpose it seemed especially fitting that each community commemorate the sacrifice made by its own citizens by planting, with suitable ceremonies, groves or avenues of trees, which should serve as living monuments to the fallen soldiers.³ Many organizations took up the idea, and the Secretary of Agriculture addressed a letter to the governors of the States suggesting that they "commend to the citizens of their States, and particularly to those in attendance upon its schools, such an observance of Arbor Day as will secure a widespread planting of trees, dedicated to those whose lives have been sacrificed in the great struggle to preserve American rights and the civilization of the world." Thousands of memorial-tree plantings have been made since that time; single trees in memory of individuals, memorial plantings along streets and highways, groves in parks, and on community grounds. The custom has also been extended to include trees and groves in honor of patriotic and civic organizations and to mark historic spots.

TREES TO PLANT

The permanent success of the Arbor Day plan, as of any other plan involving tree planting, is conditioned upon the selection of the right species and upon proper attention to the planting and the subsequent care of the trees. So various are the conditions of soil, climate, and site in the United States that it would take a volume to discuss adequately the species suitable for planting in the different regions and localities. The list given on page 10 is merely a suggestion of species generally hardy in the several States. The absence of any particular species from the list does not necessarily mean that it is unsuitable or inferior. Nor is it certain that the species included will thrive on any particular site. Soil aspect, elevation, and many other factors are important in the consideration of what species is most suitable, and it is recommended that assistance be obtained from State authorities before planting. In practically every State there is now a forestry department, State horticulturist, agriculture college, or other agency from which may be obtained suggestions as to the best kinds and sizes of trees to be

³ See list in Farmers' Bulletin 1482, *Trees for Roadside Planting*.

planted for different purposes, as well as information on the time to plant, the methods of planting, and the proper spacing of trees. Before undertaking any Arbor Day planting program, inquiry should be made of the State authorities in regard to these points.⁴

Detailed information on planting and caring for trees may be found in the following publications, copies of which may be obtained free, so long as the supply lasts, by addressing the Office of Information, United States Department of Agriculture, Washington, D. C.

Farmers' Bulletin 1208, *Trees for Town and City Streets*.

Farmers' Bulletin 1209, *Planting and Care of Street Trees*.

Farmers' Bulletin 1482, *Trees for Roadside Planting*.

Farmers' Bulletin 1481, *Planting the Roadside*.

Farmers' Bulletin 1453, *Growing and Planting Coniferous Trees on the Farm*.

Farmers' Bulletin 1123, *Growing and Planting Hardwood Seedlings on the Farm*.

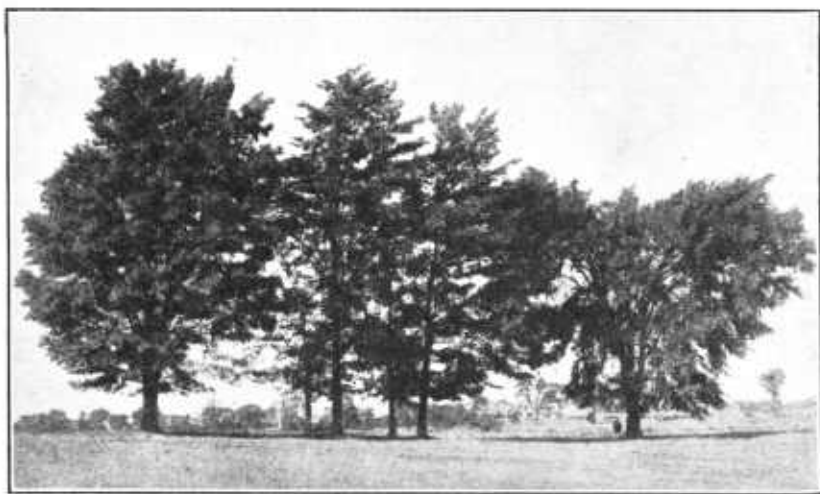
Department Bulletin 863, *Forestry Lessons on Home Woodlands*.

Farmers' Bulletin 1177, *Care and Improvement of the Farm Woods*.

Farmers' Bulletin 1087, *Beautifying the Farmstead*.

Farmers' Bulletin 1312, *Tree Planting in the Great Plains Region*.

Farmers' Bulletin 1071, *Making Woodlands Profitable in the Southern States*.



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FIG. 3.—Trees of characteristically attractive form—sugar maples and American elm

A few general principles should always be kept in mind in selecting trees to plant. Every species has a characteristic habit of growth and it is desirable to select trees which have the greatest natural beauty of form consistent with hardiness and freedom from disease and insect pests in the location where they are to be planted (fig. 3). In the case of deciduous species the tree in winter may well be the basis, at least in part, of this choice, for then the eye is not distracted from consideration of form by the beauty of the leaves. The form chosen not only should be beautiful, but should harmonize with the position in which the tree is to be placed; as, for instance, narrow columnar crowns for narrow streets, broad spreading crowns

⁴ Farmers' Bulletin 1482, *Trees for Roadside Planting*, gives information on species suitable for different regions and some descriptions of their form, leaves, and other characteristics, as well as the conditions under which they grow. Farmers' Bulletin 1208, *Trees for Town and City Streets*, gives more restricted lists suitable for growth on city streets.

for wide avenues, evergreens, in most cases, for screens, and deciduous trees near dwellings or schoolhouses. Native trees are often to be preferred, for the reason that they are known to flourish under the soil and climatic conditions of the region. Long-lived species, tough species that will not easily break or drop branches in high winds, and disease-resistant trees and those free from insect pests, are to be sought. Trees that sprout from the roots, such as poplar and black locust; have disagreeable odors, such as ailanthus; or are untidy or lose their leaves early, are in most cases to be avoided.

SOME SUITABLE TREES FOR PLANTING

The species included in this list are generally hardy in the State indicated, though for any particular site it is best to obtain the advice of local or State authorities. The list is only suggestive and the absence of any species does not necessarily mean that it is unsuitable.

Alabama.—Native pines, live oak, willow oak, laurel oak, evergreen magnolia, holly, red (sweet) gum, and dogwood.

Arizona.—Arizona and smooth cypresses, American elm, Chinese elm, native cottonwood, silver-leaf poplar, honey locust, box elder, Arizona sycamore, green ash, black locust, hackberry, and tamarisk.

Arkansas.—Chinese arborvitæ, shortleaf pine, white oak, black oak, willow oak, sugar maple, red maple, evergreen magnolia, American elm, hickories, hackberry, red gum (sweet gum), and holly.

California.—Foothills regions—Lawson cypress (Port Orford cedar), deodar cedar, California juniper, Monterey cypress, big tree, London (Oriental) plane, incense cedar.

Coastal region.—Aleppo pine, Monterey pine, redwood, Monterey cypress, English elm, California sycamore, London (Oriental) plane, California walnut, Madroña, bigleaf maple, California live oak.

Valley region.—Incense cedar, big tree, Monterey cypress, coulter pine, Norfolk Island pine, Deodar cedar, English elm, valley oak, blue gum, red gum, California sycamore.

Colorado.—Plains region—Western yellow pine, Rocky Mountain red cedar, American elm, Chinese elm, honey locust, hackberry, Russian olive, silver poplar.

Mountain region.—Blue spruce, Douglas fir, white fir, western yellow pine, native cottonwoods, and box elder.

Connecticut.—Norway pine, white spruce, white oak, red oak, black oak, pin oak, sugar maple, red maple, Norway maple, white ash, American elm, sycamore, black walnut, horse chestnut, basswood, Beech, and canoe (paper) birch.

Delaware.—Norway spruce, white spruce, arborvitæ (northern white cedar), southern white cedar, eastern hemlock, white oak, black oak, pin oak, willow oak, sugar maple, Norway maple, red maple, white ash, holly, black alder, Lombardy poplar, American elm, red (sweet) gum, London (oriental) plane, beech, basswood, and weeping willow.

Florida.—North—Live oak, laurel oak, Washington palm, Canary Island date palm, cabbage palmetto, slash pine, and longleaf pine.

South.—Australian pine, silk oak, evergreen magnolia, coconut and royal palms.

Georgia.—Deodar cedar, bald (southern) cypress, Carolina and eastern hemlocks, white oak, black oak, willow oak, laurel oak, pin oak, post oak, live oak, red maple, sugarberry, redbud, fringe tree, sweet gum, sweet bay, holly, and evergreen magnolia.

Idaho.—Blue spruce, Engelmann spruce, white fir, Douglas fir, Rocky Mountain red cedar, jack pine, western yellow pine, paper birch, Norway maple, sycamore maple, green ash, weeping willow, black cottonwood, narrow-leaved cottonwood, aspen, Balm-of-Gilead poplar, hackberry, box elder, American elm, cork elm, honey locust, and black locust.

Illinois.—White pine, Norway spruce, arborvitæ (northern white cedar), European larch, swamp white oak, black oak, bur oak, pin oak, red oak,

Norway maple, sugar maple, tulip tree (yellow poplar), sycamore, basswood, black walnut, American elm, hackberry, shellbark and bitternut hickories, and ginkgo.

Indiana.—Arborvitæ (northern white cedar), white oak, red oak, pin oak, sugar maple, Norway maple, red maple, basswood, swamp white oak, black walnut, tulip tree (yellow poplar), sycamore, American elm, and ginkgo.

Iowa.—Arborvitæ (northern white cedar), Norway spruce, white pine, white oak, pin oak, red oak, paper birch, Norway maple, sugar maple, American elm, sycamore, hackberry, and white ash.

Kansas.—Chinese arborvitæ, Scotch pine, pin oak, green ash, hackberry, honey locust, Russian olive, sycamore, black walnut, American elm, and Chinese elm.

Kentucky.—Pin oak, red oak, bur oak, overcup oak, Norway maple, sugar maple, red maple, white ash, sycamore, basswood, tulip tree (yellow poplar), ginkgo, black walnut, cucumber magnolia, and hickories.

Louisiana.—Southern cypress, laurel oak, live oak, southern red oak, post oak, evergreen magnolia, winged elm, sugarberry, sycamore, and red (sweet) gum.

Maine.—European larch, arborvitæ (northern white cedar), red spruce, white spruce, red pine, red oak, paper birch, red maple, American elm, thorn tree, beech, and basswood.

Maryland and the District of Columbia.—Arborvitæ (northern white cedar), white oak, pin oak, red oak, willow oak, Norway maple, red maple, London (Oriental) plane, American elm, basswood, European lindens, tulip tree (yellow poplar), beech, dogwood, red (sweet) gum, and ginkgo.

Massachusetts.—White pine, red pine, white spruce, red spruce, arborvitæ (northern white cedar), red oak, pin oak, European and native white birches, sugar maple, Norway maple, mountain ash, European lindens, London (Oriental) plane, American elm, horse chestnut, beech, black walnut, and butternut.

Michigan.—White pine, red pine, arborvitæ (northern white cedar), Norway spruce, eastern hemlock, balsam fir, red oak, bur oak, yellow birch, sweet birch, sugar maple, red maple, American elm, rock elm, and beech.

Minnesota.—Norway pine, white pine, white spruce, arborvitæ (northern white cedar), paper birch, sugar maple, red maple, green ash, white ash, American elm, basswood, and box elder.

Mississippi.—Laurel oak, willow oak, live oak, southern red oak, sugarberry, winged elm, sweet gum, evergreen magnolia, sycamore, and holly.

Missouri.—Shortleaf pine, oaks, sugar maple, red and green ashes, American elm, hackberry, red (sweet) gum, tulip tree (yellow poplar), black gum, evergreen magnolia, holly, and redbud.

Montana.—Douglas fir, Engelmann spruce, Rocky Mountain red cedar, green ash, cottonwoods, box elder, and black locust.

Nebraska.—Western yellow pine, Scotch pine, jack pine, bur oak, green ash, honey locust, hackberry, Russian olive, American elm, and native cottonwoods.

Nevada.—Black locust, Chinese poplar, box elder, tamarisk, native cottonwoods, and Chinese elm.

New Hampshire.—Norway and white spruces, red pine, white pine, paper birch, sugar maple, white ash, American elm, beech, and basswood.

New Jersey.—Pin oak, red oak, white oak, Norway maple, green ash, American elm, hackberry, European linden, honey locust, black locust, tulip tree (yellow poplar), sycamore, black walnut, London (Oriental) plane, red (sweet) gum, and black gum.

New Mexico.—Green and Arizona ashes, native cottonwood, black locust, Russian mulberry, tamarisk, Russian olive, and Chinese elm.

New York.—White spruce, blue spruce, white pine, Scotch pine, red pine, balsam fir, eastern hemlock, arborvitæ (northern white cedar), white oak, black oak, red oak, pin oak, basswood, beech, sugar maple, Norway maple, and American elm.

North Carolina.—Loblolly pine, longleaf pine, white oak, black oak, post oak, southern red oak, evergreen magnolia, holly, hickories, black walnut, redbud, tulip tree (yellow poplar), sycamore, red (sweet) gum, and basswood.

North Dakota.—Jack pine, Scotch pine, western yellow pine, bur oak, green ash, white willow, box elder, black walnut, American elm, hackberry, balsam poplar, Norway poplar, and Russian olive.

Ohio.—European larch, white pine, Scotch pine, Norway spruce, blue spruce, white spruce, arborvitæ (northern white cedar), white oak, red oak, pin oak, black oak, white birch, sugar maple, Norway maple, red (sweet) gum, tulip tree (yellow poplar), horse chestnut, beech, and basswood.

Oklahoma.—Chinese arborvitæ, American elm, winged elm, cottonwood, Russian olive, Russian mulberry, black walnut, Osage orange, black locust, sycamore, and London (Oriental) plane.

Oregon.—Western white pine, western yellow pine, Douglas fir, Norway maple, bigleaf maple, green ash, Russian poplar, white willow, English elm, black locust, and box elder.

Pennsylvania.—Red pine, arborvitæ (northern white cedar), Norway spruce, red oak, pin oak, European white birch, paper birch, sweet birch, red maple, sugar maple, Norway maple, tulip tree (yellow poplar), American elm, slippery elm, black walnut, sycamore, beech, and hickories.

Rhode Island.—White oak, black oak, bur oak, river birch, European white birch, red maple, sugar maple, Norway maple, American elm, yellow poplar (tulip tree), black walnut, and hickories.

South Carolina.—Bald (southern) cypress, live oak, willow oak, laurel oak, southern red oak, red maple, redbud, sugarberry, sycamore, basswood, tulip tree (yellow poplar), evergreen magnolia, ginkgo, pecan.

South Dakota.—Rocky Mountain red cedar, Scotch pine, jack pine, western yellow pine, green ash, American elm, box elder, native cottonwoods, Russian olive, and hackberry.

Tennessee.—Eastern hemlock, southern cypress, willow oak, red oak, white oak, pin oak, sugar maple, red maple, American elm, tulip tree (yellow poplar), basswood, sugarberry, black gum, red (sweet) gum, evergreen magnolia, and hickories.

Texas.—East—Bald (southern) cypress, longleaf pine, Chinese arborvitæ, pin oak, post oak, southern red oak, black oak, Texas red oak, willow oak, live oak, green ash, sycamore, American elm, cedar elm, red (sweet) gum, sugarberry, pecan, and evergreen magnolia.

West—Alligator juniper, one-seed juniper, green ash, Texas ash, native cottonwoods, Chinese elm, tamarisk, China tree, Texas umbrella tree (umbrella China tree), black locust, box elder, nogal and Mexican walnut, Osage orange, hackberry, western soapberry, and desert willow.

Utah.—Blue spruce, Rocky Mountain red cedar, western yellow pine, Scotch pine, jack pine, Austrian pine, silver maple, green ash, black locust, hackberry, sycamore, box elder, and native cottonwoods.

Vermont.—Balsam fir, tamarack, white spruce, white and red pines, sugar and Norway maples, American elm, beech, yellow birch, and basswood.

Virginia.—White and red oaks, black oak, willow oak, southern red oak, red maple, red and green ashes, horse chestnut, winged and American elm, black walnut, sycamore London (Oriental) plane, tulip tree (yellow poplar), basswood, dogwood, ginkgo, and honey locust.

Washington.—East—Western yellow pine, Rocky Mountain red cedar, cottonwoods, and box elder.

West—Douglas fir, western yellow pine, western white spruce, western white pine, Port Orford cedar, lowland white fir, Garry oak, paper birch, bigleaf maple, and madrona.

West Virginia.—White pine, tamarack, red spruce, eastern hemlock, arborvitæ (northern white cedar), pin oak, red oak, yellow birch, sugar maple, white ash, black walnut, American elm, cucumber tree, red (sweet) gum, redbud, holly, basswood, Hercules-club, flowering dogwood, and fringe tree.

Wisconsin.—Norway pine, white pine, white spruce, Norway spruce, arborvitæ (northern white cedar), white oak, bur oak, red oak, beech, yellow birch, paper birch, sugar maple, white ash, American elm, and basswood.

Wyoming.—Western yellow pine, Rocky Mountain red cedar (*Juniperus scopulorum*), lodgepole pine, blue spruce, green ash, box elder, American elm, Chinese elm, native cottonwoods, and Russian olive.

PLANTING SUGGESTIONS

The proper season for planting is not everywhere the same. Where spring is the best season—north of the thirty-seventh parallel generally—the right time is when the frost is out of the ground and before budding or growth begins.

Trees can not be thrust into a rough soil at random and expected to flourish. They should be planted in well-worked soil, well enriched. If they can not be set out immediately upon receipt, the first step is to prevent their roots from drying out in the air. This may be done by "heeling in" the trees—that is, burying the roots in fresh earth and packing it enough to exclude the air. Evergreens in particular, which are always transplanted with a base of earth about the roots, are very easily killed by allowing the roots to become dry. Before planting cut off the ends of all broken or mutilated roots; if it is a broadleaf tree, prune the tree to a few main branches and shorten these. Evergreen trees should not be pruned.

Dig holes at least 3 feet in diameter and 2 feet deep. If the soil is poor, they should be 4 feet in diameter. Make the sides perpendicular and the bottom flat. Break up the soil in the bottom to the depth of the spade blade. Spread on the bottom 12 or 15 inches of good topsoil, free from sods or other undecomposed vegetable matter. On the top of this layer spread out the roots of the tree with none of them in a cramped position and cover them with 2 or 3 inches of fine topsoil. Firm the soil about the roots, water lightly, and after the water soaks in fill the hole with good earth, continuing to firm it, but leaving the surface loose and a little higher than the surface of the surrounding soil.

When planted the trees should stand about 1 inch deeper than they stood in the nursery. They should be planted far enough apart so that at maturity they will not be crowded. This is especially important, for the trees will not grow well unless they have an adequate supply of light and moisture. (For planting distances consult publications listed on page 9.)

Young trees should not only be properly transplanted but should be cared for until they become so well established that they will grow without danger of dying of neglect.

CARING FOR THE TREES

Like any other plant, a tree requires light, water, and food. A newly planted tree especially must be tended to see that it does not suffer from lack of water, particularly during hot rainless periods. Trees along city streets, or close-cropped lawns, etc., must be fed by spading in new soil or rotted manure or other plant foods, and the soil must be kept loose by spading lightly about the trunk before it becomes hard or packed. Systematic care must be taken to see that the young trees do not suffer from drought, starvation, or suffocation. In such locations it is advisable to protect the tree by a stake and a guard during the first four or five years at least. Whatever the location, provision must be made to protect the trees against insect or fungous attacks.⁶

WOOD AND WATER

Manifestly there are thousands of trees of natural origin to every one planted by man. We have only in late years come to realize the necessity for taking care of these trees, having never before considered that they needed any care. With our forests dwindling rapidly,

⁶ *Arbor Day Handbook for New Jersey, 1924.*

with the need for wood increasing, and with the saws working at a tremendous rate in the last great body of virgin timber in the United States—that in the Pacific Northwest—we have reached the point where we must choose timber growing now or timber shortage and distress in the not far distant future.

President Roosevelt, in his Arbor Day letter to the school children of the United States, laid particular stress on that side of the Arbor Day festival which teaches the necessity of careful use and perpetuation of our natural resources.

For the nation, as for the man or woman or boy or girl, the road to success is the right use of what we have and the improvement of present opportunity. If you neglect to prepare yourselves now for the duties and responsibilities which will fall upon you later, if you do not learn the things which you will need to know when your school days are over, you will suffer the consequences. So any nation which in its youth lives only for the day, reaps without sowing, and consumes without husbanding, must expect the penalty of the prodigal whose labor could with difficulty find him the bare means of life.

A people without children would face a hopeless future; a country without trees is almost as helpless; forests which are so used that they can not renew themselves will soon vanish, and with them all their benefits. A true forest is not merely a storehouse full of wood, but, as it were, a factory of wood and at the same time a reservoir of water. When you help to preserve our forests or plant new ones you are acting the part of good citizens.

Forests are of immense importance in conserving and controlling the water needed for domestic and community uses, for irrigating farm lands, for generating electric power, and for regulating and maintaining the flow of navigable streams.

Wherever there are no forests on the hills and mountains the rain and melted snow rush off in torrents, digging out great gullies and carrying away the fertile soil. Where there is a forest the trees protect the soil from the beating of the rain and the rush of snow water; the water soaks deep into the ground to be stored up there and gradually fed out by springs all the year round; the leaf litter absorbs and holds the water like a sponge; the trunks and roots prevent the rapid run-off of water and bind the soil together. Thus the forest is of tremendous benefit in preventing both floods and drought; and it is imperative that the watersheds of navigable streams and those upon which towns, cities, irrigation projects, and water-power plants depend for their supply should be forested. In a number of the States the areas surrounding municipal and private reservoirs are systematically planted by their owners with forest trees for the protection of the water supply.

COMMUNITY FORESTS

The most significant Arbor Day tree—the tree that means most to the Nation, the State, and the community—is the tree of the forest. The community that directs the impetus of Arbor Day celebration toward the establishment of a community forest—that is, a forest owned by the city, town, or county—is not only setting up a school of the woods for its citizens but is practically certain, with good management, to find itself in possession of a paying investment. Community forests may be so located as to be useful protectors of water supply as well as serving for recreation grounds. They have also served in many cases to produce income from the sale of timber,

provide employment, and generally improve the prosperity and well-being of the city, town, or county.

New Bedford, Mass., and Keene, N. H., report returns of \$15,000 each in one year from their municipal forests. The town of Zurich, in Switzerland, has a forest reported to return about \$20,000 net income annually to the treasury. Other cities in New England and New Jersey, and in France, Germany, Switzerland, and other countries regularly supply their citizens with fuel, timber, and other commodities, and at the same time make a profit which goes into the community treasury.

In the United States at least 250 cities, towns, and counties have already established such forests with an aggregate area of more than 500,000 acres. About 40,000 acres have been planted and about 40,000,000 trees used for this purpose. New York, Pennsylvania, Massachusetts, and other States have encouraged such planting by



FIG. 4.—A plantation of shortleaf pine 35 years old, in Georgia

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giving away for that purpose small trees grown in State-owned nurseries. Of the municipalities, New York has taken the lead in planting with a total of 5,000,000 trees planted on 15,000 acres.

There is no good reason why American communities should not more generally study the advantages, civic and financial, of such forests and come to regard them as indispensable, as do the cities and towns of some European countries. In Baden, for instance, out of 1,564 communities, 1,530 possess their own forests. These are managed by foresters who see that the best species are grown, that the timber is cut only when it has passed its most profitable period of growth, and that cutting is followed immediately by natural or artificial regeneration of young trees of valuable species. By the practice of forestry these forests are made to pay for their own maintenance and return a profit, instead of being supported by taxes. They are used for recreation areas. Bird sanctuaries are often maintained in them. Beauty spots are preserved.

The community forest is thus an investment from every point of view. No better use could be made of the Arbor Day idea than to direct it toward the establishment and management of such forests (fig. 4). Their benefits once realized, the communities owning them will most certainly prize them as highly as do European timber-owning communities.

AMERICAN FOREST WEEK

Closely associated with Arbor Day in its patriotic purposes is the recently established custom of celebrating American Forest Week. Each year a week in the latter part of April is set aside by presidential proclamation for consideration of the benefits of our forests



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FIG. 5.—Growing little trees for planting on the national forests—Wasatch Nursery, Utah

and of their care and improvement and protection from fire, for tree-planting, for the devising of economies in the preparation and use of forest products, and for encouraging the perpetual forestation of our forest lands. The celebration of the week is arranged each year under the direction of an American Forest Week committee, comprising representatives of nearly 100 associations interested in forestry and kindred subjects.

The idea which developed into American Forest Week was originated by Herbert Evison, of the Washington Natural Parks Association and the week was first observed on the Pacific coast May 23–29, 1920, when Federal, State, and private agencies cooperated in an effort to bring about realization of the importance of preventing forest fires. In 1921 President Harding issued the first proclamation setting aside Forest Protection Week for national observance. Until

1925 the emphasis was laid entirely on fire prevention, the greatest destructive agency at work in our forests. In 1925 the purpose of the movement was broadened to include all phases of a national forest policy and was given to the designation American Forest Week in a proclamation by President Coolidge, in part, as follows:

In proclaiming American Forest Week, I desire to bring to the attention of all our people the danger that comes from the neglect of our forests.

For several years the Nation has observed Forest Protection Week. It is fitting that this observance be enlarged. We have too freely spent the rich and magnificent gift that nature bestowed on us. In our eagerness to use that gift we have stripped our forests; we have permitted fires to lay waste and devour them; we have all too often destroyed the young growth and the seed from which new forests might spring. And though we already feel the first grip of timber shortage, we have barely begun to save and restore.

We have passed the pioneer stage and are no longer excusable for continuing this unwise dissipation of a great resource. To the Nation it means the lack of an elemental necessity and the waste of keeping idle or only partly productive nearly one-fourth of our soil. To our forest-using industries it means unstable investments, the depletion of forest capital, the disbanding of established enterprises, and the decline of one of our most important industrial groups.

Our forests ought to be put to work and kept at work. * * * We must all put our hands to this common task. It is not enough that the Federal, State, and local governments take the lead. There must be a change in our national attitude. Our industries, our landowners, our farmers, all our citizens must learn to treat our forests as crops, to be used but also to be renewed. We must learn to tend our woodlands as carefully as we tend our farms.

* * * * *

Now, therefore, I, Calvin Coolidge, President of the United States, do recommend to the governors of the various States to designate and set apart the week of April 27-May 3, inclusive, 1925, as American Forest Week, and, wherever practicable, and not in conflict with State law or accepted customs, to celebrate Arbor Day within that week. And I urge public officials, public and business associations, industrial leaders, forest owners, editors, educators, and all patriotic citizens to unite in the common task of forest conservation and renewal.

Our timber is now being used up four times as fast as it is growing. The lumber sawed in this country amounts to about 300 feet per capita, whereas some of the nations get along with 50 feet. The high standards of living in this country are closely related to this comparative abundance of wood, and if these standards are to be maintained the forests must be handled in such a way as to perpetuate our timber supply. Fire protection, methods of lumbering that will leave the land productive instead of stripping it, reforestation of idle lands now producing nothing (fig. 5), are the means of providing for a sustained yield of lumber to meet the Nation's needs.

ORGANIZATION OF THE UNITED STATES DEPARTMENT OF AGRICULTURE

March 8, 1926

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